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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/620,435	07/17/2003	Michel-Antoine C. Moret	4594.0006-00	1086

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Finnegan Henderson Farabow
Garrett & Dunner L.L.P.
1300 I Street, N.W.
Washington, DC 20005-3315

EXAMINER

MULLINS, BURTON S

ART UNIT	PAPER NUMBER
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2834

DATE MAILED: 09/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary**Application No.**

10/620,435

Applicant(s)

MORET, MICHEL-ANTOINE C.

Examiner

Burton S. Mullins

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 September 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-18 is/are allowed.
- 6) ☒ Claim(s) 19-29 is/are rejected.
- 7) ☒ Claim(s) 30 and 31 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 September 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 19-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Redlich (US 5753985) in view of Panchanathan (US 5514224). Redlich teaches an AC oscillating motor comprising: a rotor 1 with longitudinal axis (Fig.1&5, c.4, line 11); rotor magnet 1a/1b diametrically magnetized (Fig.2); stationary coils 115 with a magnetic axis perpendicular to the rotor axis (Fig.5); the coils adapted to the rotor's outer periphery and co-axial with the rotor's longitudinal axis (Fig.5); stator 101 adapted to the stationary coils' outer periphery and co-axial with the rotor's longitudinal axis (Fig.5); the stator 101 having a substantially constant permeability for all rotor positions (inherent, Fig.5). Redlich teaches that the Nd-Fe magnets have an energy of 28 mg-Oe (c.7, line 17), but differs in that there is no specific teaching that the magnets have at least one of: a remanence of at least 10 kG, a coercive force of at least 10 kOe, an intrinsic coercive force of at least 12 kOe, and a maximum energy product of at least 10 mg-Oe.

Panchanathan teaches hot-pressed iron-earth magnets with high remanences of about 10 kG for use in applications where increased capability of the magnet is desired (c.1, lines 52-57).

It would have been obvious to modify Redlich and provide a magnet having a remanence of 10 kG per Panchanathan since it would have been desirable to increase the magnetic capability of the magnet.

Regarding claims 21-24 and 27, Redlich teaches multi-piece magnets (Figs.3&5).

Regarding claim 28, though neither Redlich nor Panchanathan teach disposal of their motor in one of applicant's claimed devices, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

Regarding claim 29, Relich teaches a recall spring 110 (Fig.5, c.7, line 25-28).

3. Claims 19-21 and 25-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Selverstone (US 4090112) in view of Panchanathan (US 5514224). Selverstone teaches an AC oscillating motor comprising: a rotor 10 with longitudinal axis (Figs.4&5); rotor magnet 60 diametrically magnetized (Fig.2); stationary coils 50 with a magnetic axis perpendicular to the rotor axis (Fig.5); the coils adapted to the rotor's outer periphery and co-axial with the rotor's longitudinal axis (Fig.5); stator 12 adapted to the stationary coils' outer periphery and co-axial with the rotor's longitudinal axis (Fig.5); the stator 12 having a substantially constant permeability for all rotor positions (inherent). Selverstone teaches that the Sm-Co magnets have a remanence of 7.5kG and a coercive force of 7 kOe (c.3, line 30-33), but differs in that

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there is no specific teaching that the magnets have at least one of: a remanence of at least 10 kG, a coercive force of at least 10 kOe, an intrinsic coercive force of at least 12 kOe, and a maximum energy product of at least 10 mg-Oe.

Panchanathan teaches hot-pressed iron-earth magnets with high remanences of about 10 kG for use in applications where increased capability of the magnet is desired (c.1, lines 52-57).

It would have been obvious to modify Selverstone and provide a magnet having a remanence of 10 kG per Panchanathan since it would have been desirable to increase the magnetic capability of the magnet.

Allowable Subject Matter

4. Claims 1-18 are allowed. The prior art does not teach the claimed rotor oscillation angle to vary substantially less than 30% between the rotor's oscillation angle at the beginning value of a frequency range of current in the coils and the angle at an ending value of the frequency range of current in the coils. Redlich discloses the relationship between oscillation amplitude θ , current $I(\text{min})$ and frequency ω (c.5, lines 10-36), but does not specify that the difference of amplitudes is kept to within 30% between the peak and the low of a cycle.

5. Claims 30-31 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior art does not teach the claimed control switch comprising a permanent magnet located outside the casing for controlling plural reed switches located inside the casing, with the reed switched supplying a system of resistors (claim 30); or

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a diametrically magnetized rotor magnet comprising plural segments arranged in parallel along the longitudinal axis, with each segment symmetrically oriented about the longitudinal axis, and the number of such segments dependent upon the required motor power output (claim 31).

Response to Arguments

6. Applicant's arguments filed 01 September 2004 have been fully considered but they are not persuasive. Panchanathan teaches preferred compositions for isotropic hot pressed permanent magnets which exhibit remanences of "at least about 9 kG to 10 kG" and "on the order of about 10kG" (c.3, lines 19 & 23-25) and thus reads on applicant's claimed recitation of magnets having "a remanence of at least 10 kG" since "about" in Panchanathan is taken to mean small variances above or below the specified value of 10 kG. Panchanathan teaches that these magnets with high remanences of at least about 10 kG are beneficial in applications where increased capability of the magnet is desired (c.1, lines 52-57).

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to

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37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Burton S. Mullins whose telephone number is 571-272-2029. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Burton S. Mullins
Primary Examiner
Art Unit 2834

bsm
13 September 2004